IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Art Unit	: 1794	**Customer No.: 035811**
Examiner	: Jenna Leigh Johnson	
Serial No.	: 10/501,638	
Filed	: July 15, 2004	
Inventors	: Taiichi Okada	Docket No.: TIP-04-1178
	: Isoo Saito	
Title	: COATED BASE FABRIC FOR AIRBAG	Confirmation No.: 2464
	: AND METHOD FOR MANUFACTURING	
	: THE SAME	
		Dated: February 8, 2008

RESPONSE

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is submitted in response to the Official Action dated November 8, 2007.

The Applicants note with appreciation the withdrawal of the 35 U.S.C. §103 rejections based on the combinations of Veiga with JP '740 and Li with JP '740.

Claims 1, 2, 4, 5 and 11 now stand rejected under 35 U.S.C. §103 over the combination of Kami with JP '740. The Applicants note with appreciation the Examiner's detailed comments hypothetically applying that combination to the rejected claims. The Applicants nonetheless respectfully submit that one skilled in the art would not make the combination and, in any event, the Applicants have achieved a surprising and unexpected result that is nowhere suggested by JP '740 and Kami, whether taken individually or collectively. Reasons are set forth below.

The essence of the rejection is that JP '740 substantially discloses the components and characteristics of the Applicants' fabric with the exception of the silicon resin coating. Thus, the rejection turns to Kami to provide support for the resin coating.

The Applicants respectfully submit that one skilled in the art would not make this combination. The reasons are remarkably simple when taken in the context of what those skilled in the art know about this technology.

Fundamentally, there are two types of fabrics employed for airbags. The first fabric type is non-coated fabric and the second type is coated fabric. Those skilled in the art are well aware of the

advantages and disadvantages associated with non-coated fabrics and coated fabrics. For example, coated fabrics have increased air impermeability, but seriously decreased flexibility and compactness. Therefore, those skilled in the art adhere to either non-coated fabrics or coated fabrics.

With this background in mind, it can be seen from the translation of JP '740 that JP '740 falls into the category of airbag fabrics that do not have a coating. The introduction to this fact can be seen beginning in paragraph [0004] of Kami wherein Kami discusses typical airbag cloths which may include a coating resin. Then, Kami moves to the important aspect that they seek to achieve which is described in paragraph [0005] wherein they acknowledge that it is important for the fabric to be lightweight and compact. To achieve this, Kami specifically teaches avoiding a coating resin on the fabric. Paragraph [0006] reinforces this point by again stating in their "objective" section in paragraph [0014] that it is an objective to solve the various problems associated with producing superior airbags that a fabric is produced that is NOT coated. Naturally, by avoiding the coating, JP '740 can maintain flexibility and compactness of the fabric. Adding a resin coating would destroy such an ability to maintain flexibility and compactness. In other words, adding a coating would stiffen the fabric and thereby reducing its flexibility, foldability, and compactness. Thus, JP '740 attacks the low permeability problem by modifying the cross section of the filaments used in forming fabric. Thus, the Applicants respectfully submit that one skilled in the art would have no incentive to employ the resin coating from Kami in conjunction with the fabrics of JP '740.

More importantly, however, the Applicants have discovered that there is an important feature that is nowhere taught or suggested by either reference. That is with respect to the number of entanglements in the filaments of the warp and weft yarns in the base fabric. The number is at most 3/m. Neither reference discloses that claimed subject matter and, interestingly, the rejection does not address this item as well. In the absence of addressing this specifically claimed item, the Applicants can only assume that it is acknowledged that there is no disclosure in either reference. As such, the Applicants respectfully submit that the hypothetical combination of Kami with JP '740 would fail to result in a fabric having the claimed number of entanglements of at most 3/m. On this basis alone, the Applicants respectfully request that the rejection be withdrawn.

The Applicants have in any event discovered that this is important which is reflected in the examples and comparative examples set forth in the Applicants' Specification. A representative sampling is discussed below.

The Applicants first invite the Examiner's attention to Comparative Example 2 which has five entanglements in the fabric per meter. The problems associated with having that number of entanglements can be seen by reference to the thickness of the fabric and thickness of the airbag as shown in Table 1. The thickness of the fabric is 0.33 mm while the thickness of the airbag is 33 mm. This is sharply contrasted to Examples 5 and 6 in Table 1 which have two entanglements per meter. However, the thickness of the fabric is 0.26 and 0.25, respectively, and the thickness of the airbag is 27 and 23 mm, respectively. Thus, the degrees of thickness of the fabrics in airbags are very, very substantially different between two entanglements per meter and five entanglements per meter. Interestingly, there is virtually no difference in thickness of the fabric in the airbag when moving to fifteen entanglements per meter as shown in Comparative Examples 3 and 4 wherein the thicknesses of the fabric in the airbag are virtually the same as with five entanglements per meter. This is completely unexpected.

A further difficulty arises with respect to the degree of stiffness which is also very, very different between two entanglements per meter and five entanglements per meter. Again, when looking to Examples 5 and 6, the degree of stiffness is 77 and 75, respectively. However, when there are five entanglement per meter as set forth in Comparative Example 2, the degree of stiffness rises to 114. This is completely unexpected and is also unexpected with respect to adding further entanglements up to fifteen per meter as shown in Comparative Examples 3 and 4 wherein the number of entanglements actually decreases slightly. Thus, the Applicants respectfully submit that the experimental results set forth in their Specification show a surprising and unexpected result in thickness and degree of stiffness depending on the number of entanglements. If the number of entanglements is no more than three, the resulting fabric is thin and flexible. However, moving beyond three to five entanglements per meter causes a dramatic increase in thickness and stiffness. This phenomenon is graphically shown in the attachment which shows an essentially flat line to the left when the entanglements are less than three, but increases rapidly when moving to five entanglements per meter span and then levels off when there are far more entanglements.

The Applicants respectfully submit that one skilled in the art would not even think of the number of entanglements per meter based on the disclosures of Kami and JP '740, much less that the number of entanglements per meter should be limited to no more than three. Moreover, there would

surely be no expectation of the phenomenon discovered by the Applicants as roughly shown in the attached graph.

The Applicants respectfully submit that this is compelling evidence of patentability on top of the fact that neither reference even mentions this claimed feature. The Applicants therefore respectfully request that the rejection be withdrawn.

In light of the foregoing, the Applicants respectfully submit that the entire Application is now in condition for allowance, which is respectfully requested.

Respectfully submitted,

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